

PHILIP MORRIS
U.S.A.
INTER-OFFICE CORRESPONDENCE
RICHMOND, VIRGINIA

To: . Dr. P. A. Eichorn Date: September 8, 1971
From: . W. Dunn, M. Johnston, F. Ryan, and T. Schori
Subject: . Plans for 1972

1. We will concentrate upon the nicotine/tar ratio as a factor in determining cigarette acceptability. We have established that at nicotine levels ranging upwards from current production, the current production level of nicotine is preferred. However, the nicotine/tar ratio was not an independent variable since the base tar delivery of 16 mg increased absolutely with the increase of nicotine. Subsequently we established that among combinations of three levels of nicotine (1.2, 1.9, 2.2) and three levels of tar (10, 16, 19) the low nicotine/high tar combination was preferred. Note that the lowest nicotine level tested was the current production level for flavorful filters. In a third study which gave smokers the option of very low nicotine (0.3 mg) and production level nicotine (1.2 mg) with a constant high tar delivery (24 mg), the preference was a function of smoker variables, notably sex and brand smoked.

Our plans now are to concentrate upon that nicotine delivery range between 0.3 and 1.2 mg with a systematic manipulation of the nicotine/tar ratio at incremental nicotine levels within this range. The nicotine/tar ratio of .07, which is characteristic of a broad range of natural leaf, shall be taken as the mid-point of the ratio range. Obviously we must segment our smoking population for establishing optimum ratio levels.

Cigarettes with the following parameters will be smoked in order to determine optimal nicotine/tar ratios for cigarette acceptability of relatively low delivery cigarettes.

Nicotine				
	.3	.6	.9	1.2
6	*	*	*	*
12	*	*	**	**
18	*	**	**	**

*made from low nicotine tobacco

**made from conventional tobaccos

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Also, using the low nicotine tobacco (.3 mg nicotine) and air dilution or filtration techniques, the following low nicotine cigarettes will be evaluated in terms of their acceptability, first in local then, where indicated, national testing:

1. 18, 12, 6 mg tar vs. Marlboro
 2. 18, 12, 6 mg tar vs. Kent
 3. 18, 12, 6 mg tar vs. Cigarette "Gold"
2. We plan to investigate the relationship between socio-economic status and smoking behavior in terms of whether or not the panelist smokes, type and brand smoked, quantity smoked, and changes over time in brand and quantity smoked.

We will:

1. investigate relations between Status Inconsistency and Personality Characteristics
 2. look for SES relations in differences between smokers and nonsmokers which have been attributed to smoking.
3. Continuing an ongoing program in economic analyses, we plan to:
- a. Keep management apprised of the trends of tar and nicotine deliveries of cigarettes on the market by continuing to provide a regular quarterly report and analysis of weighted average tar and nicotine deliveries.
 - b. Provide economic forecast and information as guidance to the corporation by continuing the annual contribution to the Philip Morris U.S.A. Five-Year Plan.
 - c. Provide economic information, principally for R & D and New York Marketing and Financial management, on selected economic aspects of cigarettes and their sales, through the study of such topics as:
 1. the elasticity of demand for cigarettes
 2. the impact of a value-added tax
 3. switching patterns
 4. brand image

4. We plan to complete our study of difference thresholds for RTD and menthol. In these studies we are looking for the just-noticeable differences which smokers can detect in these parameters.
5. We plan to study the relationship between Sustained Performance and Smoking:
 - a. On-the-job Situation

Actual or simulated job situations will be used to study the effect of smoking on worker productivity.
 - b. Driver Fatigue

The effect of smoking on driving performance will be evaluated in an actual 8-10 hour driving task.
6. We plan to systematically observe puffing patterns across different cigarettes using portable recorders being developed by Engineering in order to:
 - a. Find standard puff profiles of a restricted group of smokers while working at their desks, smoking preferred cigarettes
 - b. Find how standard puff profiles of this group are changed when cigarette characteristics are changed (e.g. switch Multifilter smokers to Marlboros, Marlboro smokers to Multifilters).
7. We plan to hold the conference on Motivational Mechanisms in Cigarette Smoking in January, 1972, and publish the proceedings as expeditiously as possible. Two papers from Philip Morris R & D will be included.
8. Major strides have been made in maximizing computer usage in conducting our national field test program in terms of roster maintenance, panel selection, data processing and reporting. During the forthcoming year we shall concentrate on rebuilding the roster by eliminating inactives and recruiting new members.

The program whose objective is to determine the relationship between emotional state and smoking will be aggressively pursued during the forthcoming year. We intend to:

1. Further investigate relation between personality test scores and predicted puff rates among college students, e.g. anxiety and puff rate
 2. Expand shock-anxiety program to include other noxious stimuli, e.g. loud noises
 3. Expand dependent variables measured to include puff volume.
9. As a follow-up upon the demonstration of the preference justification effect as a contaminating variable in our current field test procedures, we plan to actively explore other field test formats which would minimize the preference justification effect. Two such candidates have already been developed and will be tested within the next quarter.
10. If the trend of the past 15 years continues, it will be necessary to progressively reduce the tar delivery of our marketed brands in the future. Anticipating this need, we plan to address ourselves to the problem of determining the optimum way, among the multiple possible ways, of reducing the tar delivery of a cigarette.

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Handwritten signature and initials, possibly "J. H. H." or similar, with a date "11/11/71" and other illegible markings.